

Elementary Science K-4 Core Curriculum
Terms & Definitions

Revised October 2005

Please note that these terms represent those taken directly from the NYS Elementary Science Core Curriculum for Grades K-4

Absorption

When light hits a wall, the wall stops or absorbs the light. Stopping light is called **absorption**.

Acquired

To come into possession or control of, often by unspecified means.

Adaptation (Animal)

A structure or behavior that enables an organism to survive in its environment. The thick fur of some animals is an **adaptation** to cold environments.

Adult

The final stage of an organism's life cycle. A butterfly is the **adult** form of a caterpillar.

Advantage

A factor or circumstance of benefit to its possessor.

Affected

To produce a material influence upon or alteration in.

Air Mass

A huge body of air which all has similar temperature and moisture.

Air Pressure

Particles of air pressing down on the Earth's surface.

Alcohol

A mixture of ethanol and water that is usually 95 percent ethanol.

Animals

Any of a kingdom of living things including many-celled organisms and often many of the single-celled ones that typically differ from plants.

Application (see apply)

An act of applying.

Apply

To put to use, especially for some practical purpose.

Atmosphere

The layer of air that surrounds Earth.

Attract

To pull or draw toward oneself or itself.

Availability

The quality or state of being available.

Balanced diet

To eat a diet that contains nutrients such as vitamins, minerals, and protein in healthy proportions.

Balance

To arrange so that one set of elements exactly equals another.

Battery

A battery stores electrical energy. **Batteries** come in many shapes and sizes.

Beginning

The point at which something starts.

Behaviors

The manner of conducting oneself.

Blinking

To open and close the eyes.

Body fat

Helps hold in heat, keeping the skin warm.

Breath

Air inhaled and exhaled.

Bulb

1. a glass envelope enclosing the light source of an electric lamp; 2. resting stage of a plant.

Burning

When things burn, different kinds of matter form.

Camouflage

The process of animals changing their colors, patterns, and shapes to disguise them from predators or prey.

Chemical Changes

Changes that form different kinds of matter.

Characteristics

Distinguishing trait, quality or property. Hair color, eye color, and height are examples of characteristics.

Chemical Change

A change that produces one or more new substances and may release energy.

Chemical Property

A second set of properties in all kinds of matter.

Circuit

A path that is made from an electrical current.

Claws

A sharp, usually slender, and curved nail on the toe of an animal.

Closed Circuit

Electricity travels in a closed circuit

Cloudy

Resembling or relating to clouds; overcast with clouds.

Combining

To come together to form a unit, as in a chemical reaction: when elements come together and form a chemical compound.

Communicating

To share knowledge or information.

Compete

To be in a state of rivalry.

Components

A constituent part; ingredient.

Condensation

The process by which water vapor changes from a gas to liquid.

Condition

To put into proper state for use or work; an environmental requirement, for example available oxygen is essential for animal life.

Conduction

The transfer of thermal energy caused by particles of matter bumping into each other.

Convert

To alter the physical or chemical nature or properties.

Crop

A plant or animal product that can be grown and harvested extensively for profit or subsistence.

Cultivating

To prepare or prepare and use for the raising of crops.

Cycles

An interval of time during which a sequence of a recurring succession of events is completed.

Decisions

A determination arrived at after consideration.

Decomposer

A living thing that feeds on the wastes of plants and animals or on their remains after they die.

Decreases

To grow progressively less.

Defense Mechanism

A response that an organism makes to a stimulus that could pose harm, example: A cat's fur stands on end when feeling threatened by a dog

Depend

To be determined, based or contingent, i.e., life is dependent on food. Plants depend on sun, water, and soil nutrients to grow.

Dependent

Relying on another for support.

Deposit

Matter deposited by a natural process; matter deposited by a natural process.

Deposition

An act or process of depositing.

Describe

To represent or given an account of in words

Developing

To set forth or make clear by degrees or in detail.

Development

The act, process or result of developing.

Die

To pass from physical life.

Different

Partly or totally unlike in nature, form or quality.

Direction

Guidance or supervision of action or conduct; the line or course on which something is moving.

Disperse

To cause to evaporate or vanish; to cause to break up.

Distances

The degree or amount of separation between two points.

Earth

Areas of land as distinguished from sea and air.

Earthquakes

The shaking of Earth's surface caused by movement of the crust and mantle.

Egg

The first stage in an organism's life cycle. Ex. A baby bird hatches from an egg.

Electric Cell

A device that supplies energy to move charges through a circuit.

Electric Current

A flow of electric charges.

Electric Field

The space around an object in which electric forces occur.

Electricity

A form of energy that people produce from the active energy of wind and moving water and the stored energy in oil and coal.

Eliminate

To cast out or get rid of.

Enable

To provide with the material or opportunity.

Energy

The ability to cause change, ex. Wind energy can cause a rock to move, heat energy can cause a plastic container to melt.

Energy Pyramid

A diagram that shows that the amount of useable energy in an ecosystem is less for each higher animal in the food chain.

Engaging

Tending to draw favorable attention.

Environment

The things, both living and nonliving, that surround a living thing.

Erosion

The breaking down and carrying away of rock and soil caused by such forces as wind and flowing water.

Evaporation

The process by which a liquid changes into gas.

Exist

To come into being.

Extinct

Describes a species that is gone forever because all of its kind have died.

Food chain

The path of food from one living thing to another.

Force

A push or a pull.

Form

The shape and structure of something as distinguished from its material.

Friction

The force between two moving objects that tries to keep the objects from moving freely.

Fruit

The part of a flowering plant that surrounds and protects the seeds.

Function

The action for which a person or thing is specially fitted or used or for which a thing exists.

Fur

The hairy coat of a mammal.

Gas

A form of matter that does not have a definite shape or a definite volume.

Germinate

When a new plant breaks out of the seed.

Germination

The sprouting of a seed.

Gills

A body part found in fish and young amphibians that takes in oxygen from the water.

Graduated cylinders

A long cylindrical tube of either plastic or glass with increments in ml or L used to measure the volume of liquids

Gravity

A force that pulls all objects toward each other. Earth's gravity pulls objects towards the center of the earth

Groundwater

A form of fresh water that is found under Earth's surface.

Grow

To spring up and develop to maturity.

Hand lenses

Hand held magnifying lens used to view/study objects in greater detail

Hardness

A measure of how easily a mineral can be scratched.

Heart rate

The number of times your heart beats in one minute.

Heat

The movement of thermal energy from one place to another.

Heat energy

The transfer of thermal energy from one piece of matter to another.

Hibernate

When animals go into a deep sleep.

Hurricanes

A tropical cyclone with winds 74mph or greater usually accompanied by rain, thunder and lightning.

Illicit drugs

Drugs that are illegal, not prescribed and can cause addiction and harm to humans

Impact

1. A forceful contact or collision 2. causing a significant or major effect on something

Inclined planes

A flat surface set at an angle to another surface. It has many uses, one of which is to make pushing or pulling a large object easier

Increases

To become progressively greater.

Inference

An **inference** is an opinion based on what you have observed and what you know about a situation.

Influence

To affect or alter

Inherit

To receive traits from parents.

Interaction

Mutual or reciprocal action or influence.

Land

Solid part of the surface of the earth.

Larva

The early form of an animal that at birth or hatching is fundamentally unlike its parent.

Learned

To gain knowledge or understanding of or skill in by study, instruction or experience.

Leaf

A plant part in which photosynthesis takes place.

Length

The longest dimension of an object.

Lever

A bar that moves on or around a fixed point.

Life Processes

The functions that a living thing must carry out to stay alive and produce more of its own kind.

Life Cycle

The stages of development in a living thing. A Butterfly life cycle begins with an egg, then develops into a larva, pupa, and finally an adult butterfly.

Life span

The duration of existence of an individual. A housefly does not have a very long life span, compared to a lion.

Light Year

A unit of measurement representing the distance that light travels in one year.

Limbs

A pair of appendages (as wings or arms/legs) of an animal (bird) or human.

Liquid

Matter that has a definite volume but no definite shape.

Magnet/Magnetic

An object that attracts certain materials, such as iron or steel.

Maintain

To keep in an existing state

Manufacture

To make into a product suitable for use.

Mass

A measure of how much matter there is in an object.

Material

Relating to, derived from, or consisting of matter.

Matter

Everything in the universe that has mass and takes up space.

Mature

Having completed natural growth and development.

Mealworms

The larvae of various beetles.

Mechanical

Of or relating to machinery or tools.

Mechanism

A process or technique for achieving a result.

Migration

The movement of a group of one type of animal from one region to another and back again.

Moisture

Liquid diffused or condensed in relatively small quantity

Moon

A natural object that revolves around a planet.

Motion

A change of position.

Movement

The act of process of moving; change of place or position.

Naturally occurring

Not man made, found on the earth, happening without human interference. A rainbow is a **naturally occurring** phenomenon.

Non-living

A form of matter that exists but does not perform life functions/life processes. A rock is non-living.

Nutrients

Substances that are needed for an organism to live and grow.

Observable Characteristics

Features that can be seen or observed using the senses. One **observable characteristic** of a giraffe is its long neck. An **observable characteristic** of a jalapeno pepper is its hot and spicy taste.

Observation

An **observation** is made with your senses.

Odor

A quality of something that stimulates the olfactory organ (scent, smell).

Offspring

The progeny of an animal or plant.

Operate

To perform a function

Organism

A living thing is called an organism

Parent

One that brings forth offspring.

Particle

A minute quantity or small/tiny fragment.

Pattern

A sample of traits, acts, or observable characteristics that are similar

Perspiration

The release of water, salts, and wastes through pores in the skin.

Phenomena

Known through the senses rather than by thought or intuition.

Physical Property

Anything you can observe about an object by using your senses.

Position

A certain place

Precipitation

Water that falls to Earth as rain, snow, sleet, or hail.

Predator

An animal that hunts another animal for food.

Prey

The animal that is hunted is called the **prey**.

Producer

A living thing such as a plant, that makes its own food.

Profound

1. Something that is very deep. 2. Having intellectual depth and insight; extending far below the surface, 3. Something that is very complete.

Properties of Air

Air is all around you, you can't see it but you can observe its properties.

Pulley

A pulley is a rope over a wheel that changes the direction of the force you use.

Pupa

An intermediate stage of an insect, i.e, beetle, that occurs between the larvae and the imago state.

Rain

Water that returns to Earth as precipitation after it becomes vapor and cools to again form water.

Reactivity

Readily responsive to a stimulus.

Recycle

To reuse a resource to make something new.

Reflect

To bounce light off an object.

Related

To show or establish a logical connection between. A fern and a flower are related because they are both plants.

Relationship

The state of being related.

Released

To set free from restraint or confinement.

Repel

To drive back, turn away, reject.

Reproduce

To produce new individuals or organisms of the same kind. Fish reproduce to make more fish.

Reproduction

The act of reproducing.

Resemble

To be like or similar.

Resource

A source of supply or support; an available means. Water is a very important resource.

Respond

To act or react in response to something. When we are cold we respond by shivering.

Revolution

The action of going around in an orbit. The earth circles the sun, this is called revolution. Earth makes one **revolution** around the sun every 365 $\frac{1}{4}$ days. One revolution takes one year.

Root

The underground part of a plant that anchors and absorbs water and nutrients.

Rotation

The spinning motion of an object on its axis.

Rubbing

1. to place 2 objects together and apply force in a back and forth motion.

Runoff

The portion of precipitation (from snow or rain) on land that ultimately reaches streams

Saliva

The liquid in the mouth that begins the chemical breakdown of food. Sometimes it is called spit.

Scales

The small thin, flat plates that help protect the bodies of fish and reptiles.

Seasonally

Relating to the seasons. Thanksgiving is a seasonal festivity that occurs in late Fall.

Seed

The first stage in the growth of many plants.

Sense

To detect automatically in response to a physical stimulus as light or movement. You can sense that a surface is hot by touching or feeling the heat it gives off.

Sequence

A continuous or connected series.

Shape

The visible makeup or characteristic of a particular item; to give a particular form or shape.

Shed

To cast off some natural covering, such as fur or skin.

Shells

An external case or outside covering (such as mollusk, fish; fruit or seed); the hard, touch outer covering of an egg (as a bird or reptile);

Shelter

Something that covers or provides protection. A house is considered a form of shelter.

Shivering

To undergo trembling or quiver.

Similar

Having characteristics in common.

Simple machine

A tool that helps people do work. A pulley, inclined plane, wedge, and lever are examples of simple machines

Sink/float

To fall or drop to a lower place; to rest on the surface – these refer to items or objects placed in a liquid or water

Sleet

Frozen or partly frozen rain.

Snow /Hail

Precipitation in the form of small white ice crystals formed directly from the water vapor of the air at a temperature of less than 32 degrees Fahrenheit.

Soil

The loose material (dirt) in which plants can grow in the upper layer of Earth.

Solid

A form of matter that takes up a specific amount of space and has a definite shape.

Sound

A form of energy that travels through matter as waves.

Space

A boundless three-dimensional extent in which objects and events occur and have relative position and direction.

Species

A name that identifies a specific kind of organism. A tiger and house cat are different species of cats.

Spine

Backbone made up of small bones called vertebrae that protect your spinal cord.

Stages

One of a series of positions or time periods. A caterpillar goes through a series of stages before it becomes a butterfly.

Stalk

The main part of an herbaceous plant.

Stars

A huge globe of hot gases that shines by its own light.

Stem

The part of a plant that supports the leaves and flowers and carries water to those parts.

Structure

Something that is arranged in a definite pattern of organization, i.e., leaves and other plants.

Substance

A type of matter that has a unique set of properties. For example, no other substance has exactly the same properties as water.

Sun

The sun is the center of the solar system, it is a star, a hot ball of glowing gases.

Supply

To furnish organs, tissues or cells with a vital element as blood or nerve fibers.

Support

To keep going, to uphold.

Surroundings

The circumstances, conditions or objects by which one is surrounded.

Survival

The continuation of life or existence

Temperature

The measure of how hot or cold something is.

Texture

Size, shape, and feel of various materials and substances. Cotton has a texture different from paper. Textures can be rough, smooth, sticky, bumpy, grainy, etc.
Size and shape of mineral grains and the way in which they are arranged in a rock.

Thermal Energy

The energy that moves the particles in matter.

Thermometer

A tool used to measure temperature.

Thrive

To grow vigorously, flourish.

Tobacco

A tall erect plant that is cultivated for its leaves. Tobacco is used to make cigarettes. These are bad for your health.

Tornadoes

A tropical thunderstorm.

Trait

A body feature that an animal inherits; it can also be some things that an animal does.

Trunks

The human or animal body apart from limbs and head.

Utilize

To make use of.

Variations

1. changes in a species of organism over time compared to the whole population of that species
2. The act or process of varying; a measure of the change in data

Vital role

Necessary to the maintenance of life, important role in the life or survival of an organism

Volcano

A mountain that forms when red-hot melted rock flows through a crack onto Earth's surface.

Volume

The amount of space that matter takes up.

Waste

Discarded as worthless, defective, or of no use.

Water cycle

A continuous process in which water moves between the atmosphere and Earth's surface, including the use of water by living things.

Weather

The happenings (rain, snow, sunshine, wind, sleet, hail, hurricane, tornadoe) in the atmosphere at a certain time.

Weight

The measure of the pull of gravity on an object.

Width

The horizontal measurement taken at right angles to the length